

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
2 October 2003 (02.10.2003)

PCT

(10) International Publication Number  
**WO 03/080111 A3**

(51) International Patent Classification<sup>7</sup>: **A61K 39/00**,  
39/39, A61P 35/00

(21) International Application Number: PCT/CA03/00434

(22) International Filing Date: 25 March 2003 (25.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/366,531 25 March 2002 (25.03.2002) US

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(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,  
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,  
UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

(88) Date of publication of the international search report:  
13 November 2003

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(54) Title: **CHEMOTHERAPEUTIC AGENTS AS ANTI-CANCER VACCINE ADJUVANTS AND THERAPEUTIC METHODS  
THEREOF**

(57) Abstract: The present invention relates to an anti-cancer vaccine composition comprising an antigen in association with an effective amount of at least one immunomodulator chemotherapeutic adjuvant eliciting an immune response in a patient and a pharmaceutically acceptable carrier. It also relates to method of preventing tumor growth and reducing tumor growth using the anti-cancer vaccine composition of the present invention.

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 03/00434

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K39/00 A61K39/39 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2001/038841 A1 (HISERODT J.C. ET AL) 8 November 2001 (2001-11-08) the whole document	1-38
A	WO 98 16246 A (JOHNS HOPKINS INTITUTE) 23 April 1998 (1998-04-23) the whole document	1-38
X	DATABASE MEDLINE 'Online! US NATIONAL LIBRARY OF MEDICINE (NLM), BETHESDA, MD, US; February 2001 (2001-02), EMENS L A ET AL: "Chemotherapy: friend or foe to cancer vaccines?" XP002254169 Database accession no. NLM11249735 abstract -/--	1,2

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&\* document member of the same patent family

Date of the actual completion of the international search

11 September 2003

Date of mailing of the international search report

24/09/2003

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>&amp; CURRENT OPINION IN MOLECULAR THERAPEUTICS. FEB 2001, vol. 3, no. 1, February 2001 (2001-02), pages 77-84, ISSN: 1464-8431</p> <p>-----</p> <p>DATABASE BIOSIS 'Online! BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; 16 November 2000 (2000-11-16), REECE D E ET AL: "Use of the anti-idiotypic (ID) antibody (AB) vaccine 11D10 (TRIAB) in patients (PTS) with metastatic breast cancer (MBC) undergoing autologous stem cell transplantation (ASCT)." XP002254170 Database accession no. PREV200100317653 abstract &amp; BLOOD, vol. 96, no. 11 Part 1, 16 November 2000 (2000-11-16), page 844a, 42ND ANNUAL MEETING OF THE AMERICAN SOCIETY OF HEMATOLOGY; SAN FRANCISCO, CALIFORNIA, USA; DECEMBER 01-05, 2000 ISSN: 0006-4971</p> <p>-----</p>	1-38
P,X	<p>RADCLIFF FIONA J ET AL: "Mobilization of dendritic cells in cancer patients treated with granulocyte colony-stimulating factor and chemotherapy." BRITISH JOURNAL OF HAEMATOLOGY OCTOBER, 2002, vol. 119, no. 1, October 2002 (2002-10), pages 204-211, XP002254168 &amp; ISSN: 0007-1048 the whole document</p> <p>-----</p>	1-38

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA 03/00434

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 18-38 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 03/00434

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2001038841	A1	08-11-2001	US 6277368 B1	21-08-2001
			AU 3965597 A	20-02-1998
			EP 0915708 A1	19-05-1999
			WO 9804282 A1	05-02-1998
			US 2001036458 A1	01-11-2001
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WO 9816246	A	23-04-1998	AU 4818297 A	11-05-1998
			EP 0930892 A1	28-07-1999
			JP 2001502331 T	20-02-2001
			WO 9816246 A1	23-04-1998
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